In re Patent Application of:
JIANG ET AL.
Serial No. **10/651,140**
Filed: **AUGUST 30, 2000**

REMARKS

Claims 1 to 7, 9 to 13, 15, 19 to 28, 31, 32, 37, 39 and 41 to 46 are currently pending. Claims 6, 7, 26 and 41 to 44 have been withdrawn from consideration. Claims 1 to 5, 9 to 13, 15, 19 to 25, 27, 28, 31, 32, 37, 39, 45 and 46 have been rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent No 5,337,396 (Chen) in view of United States Patent No. 5,117,476 (Yingst) alone or in combination with one or more of United States Patent No 5,005,939 (Arvanitakis), 6,175,727 (Mostov), 4,178,051 (Kocher) and 6,581,830 (Jelinek).

The claims of the application have been amended to overcome the objections of the Examiner and to better define the invention in light of the prior art. In particular, claims 2, 20, 31, 32 and 41 to 46 have been canceled. Claims 1 and 19 have been amended to clarify that "the fiber optic module" and "the module cage" are completely separate elements that are never permanently assembled together, but rather repeatedly slideably engageable and disengageable. The module cage is separately "mounted on a host printed circuit board of a system chassis", while the fiber optic module is "slideable into and out of a cage, which is mounted on a host printed circuit board of a system chassis". Furthermore, the printed circuit board of the fiber optic module now includes a "pluggable electrical connector" for mating with a corresponding electrical connector in the module cage on the

host printed circuit board. Accordingly, the guide rails provide a guide for the fiber optic module as the guide rails slide into the slots in the cage, so that the two electrical connectors can mate. Moreover, since the guide rails are electrically connected to the electromagnetic interference (EMI) shield, any EMI will be shunted through the guide rails and the slots to the ground of the host device. These features are both novel and non-obvious in a pluggable optical transceiver.

Both the Yingst and Chen references relate to board mounted transceivers, which do not depend on a cage for mounting onto a host PCB, but rather include a housing, e.g. frame 11 or outer shell 28, which encases the optical and electrical components prior to mounting on the host PCB. Accordingly, the optical modules disclosed in the Yingst and Chen references do not include a guide rail extending therefrom for mating with slots in a module cage, which is already mounted on a host PCB. Furthermore the guide rail and slots found on the Yingst and Chen devices do not guide the pluggable electrical connectors of the optical module and the host PCB together during insertion, because the electrical connectors in Yingst and Chen are elongated pins, which extend perpendicular to the slots and guide rails. In the Yingst and Chen references, all of the components are assembled together, with the PCB encased inside the housing, before the connector pins are soldered to the host PCB.

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Another advantage of having guide rails extending outwardly from the optical module is ability to shunt EMI from the EMI shield to the cage slots and then to the ground of the host device, when the optical module is disposed in the cage. Neither of the cited references discloses the ability to shunt the EMI of a removable transceiver to the system ground via guide rails extending from the optical module itself. In Yingst and Chen the PCB is grounded to the housing of the optical module, which is grounded to the host PCB. According to the present invention, the housing of the optical module is grounded to the PCB, which is grounded to the host PCB.

Another novel feature of the present invention is defined in claim 37, which defines a locking mechanism including a rocker arm and a cam. Only a basic ejection mechanism is disclosed in the Jelinek reference, not the added feature of a locking mechanism.

As such, it is respectfully submitted that all of the claims remaining in the application are in condition for allowance. Early and favorable consideration would be appreciated.

Should any minor informalities need to be addressed, the Examiner is encouraged to contact the undersigned attorney at the telephone number listed below.

Please charge any shortage in fees due in connection with the filing of this paper, including Extension of Time fees, to

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Deposit Account No. 50-1465 and please credit any excess fees to such deposit account.

Respectfully submitted,

Telephone: (321) 725-4760

CHARLES E. WANDS
Customer No. 27975

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